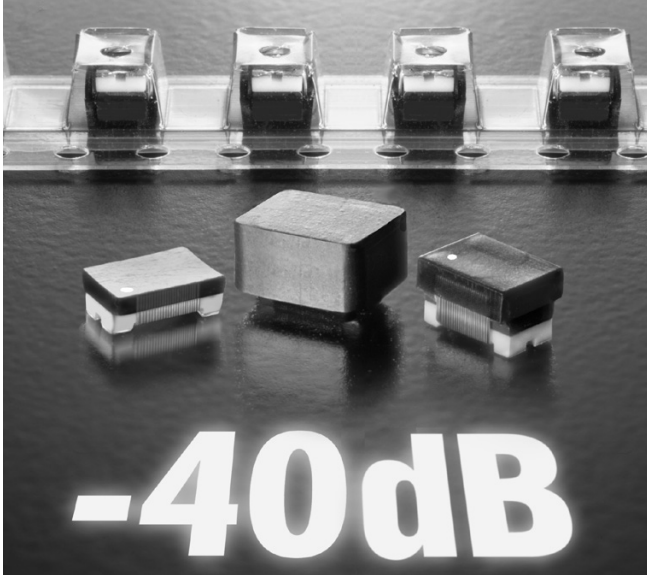


Common Mode EMI Filters – M2022



- Provide excellent noise attenuation
- Compact, 1812 size surface mount package.
- Available as the standard filter, a low profile (-ALPL) and a shielded (-ASL) version
- Excellent isolation, environmental stability and low cost.

Core material Ferrite

Terminations RoHS compliant gold over nickel over moly-manganese

Weight: M2022-AL 155 mg; M2022-ALPL 85.5 mg; M2022-ASL 319 mg

Ambient temperature -40°C to +85°C

Storage temperature Component: -40°C to +85°C.

Tape and reel packaging: -40°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

| Part number | Common mode peak impedance (kOhms) | Cutoff frequency ² (MHz) | Inductance ³ (µH) | DCR max ⁴ (mOhms) | Isolation ⁵ (Vrms) | Current max (mA) |
|-------------|------------------------------------|-------------------------------------|------------------------------|------------------------------|-------------------------------|------------------|
| M2022-AL_ | 38.3 @ 120 MHz | 170 | 4.2 ±10% | 800 | 500 | 500 |
| M2022-ALPL_ | 40.0 @ 160 MHz | 120 | 4.0 ±10% | 990 | 500 | 500 |
| M2022-ASL_ | 32.0 @ 66 MHz | 140 | 11.5 min | 850 | 500 | 500 |

1. When ordering, please specify **packaging** codes:

M2022-ALPLC
↓

- Packaging:**
- C** = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel).
 - B** = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter C instead.
 - D** = 13" machine-ready reel. EIA-481 embossed plastic tape (2200 parts per full reel).

2. Frequency at which the differential mode attenuation equals -3 dB
3. Inductance is per winding, measured at 10 MHz.
4. DCR is specified per winding.
5. Winding to winding isolation (hipot) tested for one minute.
6. Electrical specifications at 25°C.



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

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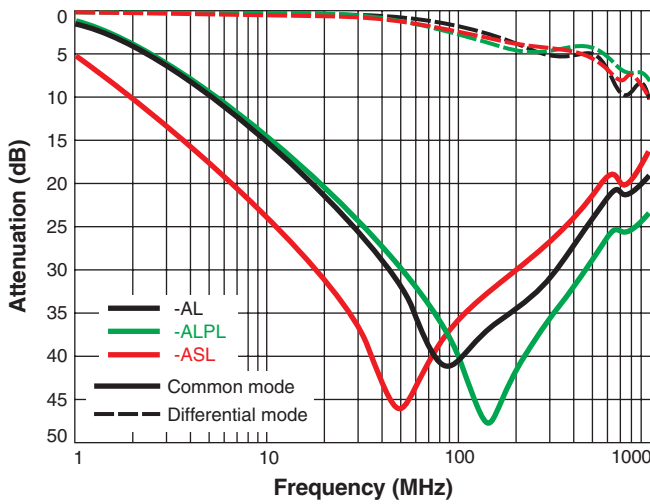
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.



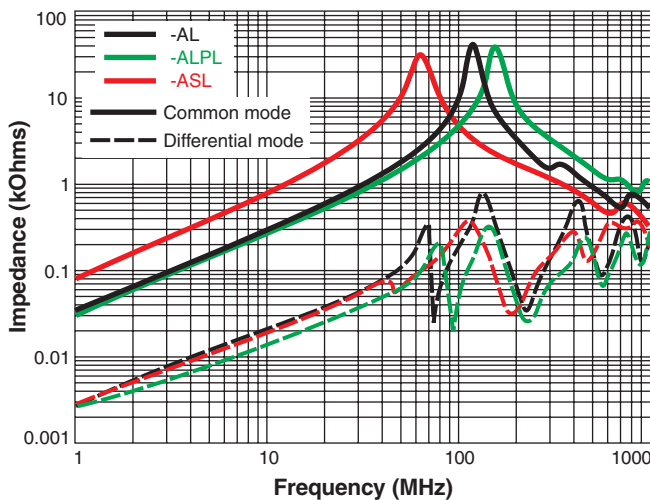
M2022 Common Mode EMI Filters

Typical Attenuation*

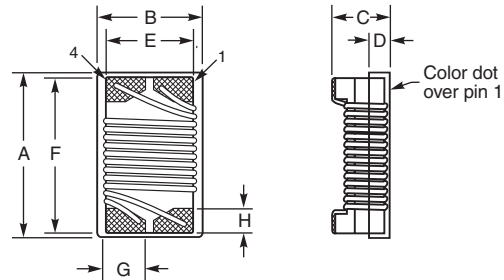


*Ref: 50 Ohms.

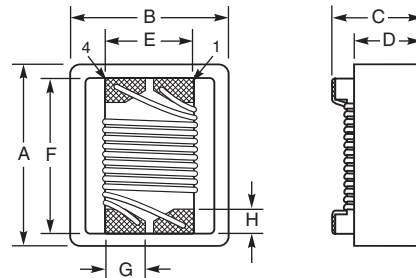
Typical Impedance vs Frequency



M2022-AL, M2022-ALPL



M2022-ASL



M2022-AL

| A max | B max | C max | D ref | E ref | F ref | G min | H |
|-------|-------|-------|-------|-------|-------|-------|------|
| 0.195 | 0.150 | 0.135 | 0.070 | 0.100 | 0.178 | 0.04 | 0.03 |
| 4,95 | 3,81 | 3,43 | 1,78 | 2,54 | 4,52 | 1,02 | 0,76 |

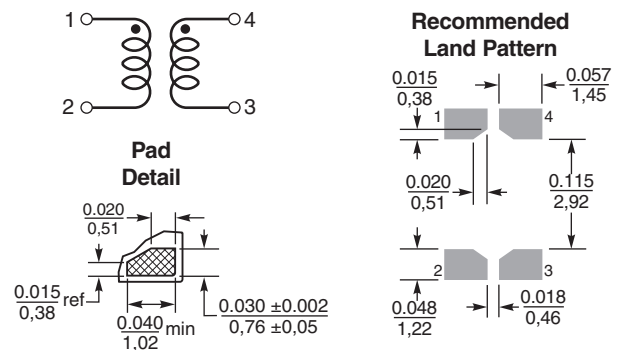
M2022-ALPL

| A max | B max | C max | D ref | E ref | F ref | G min | H |
|-------|-------|-------|-------|-------|-------|-------|------|
| 0.195 | 0.150 | 0.079 | 0.070 | 0.100 | 0.178 | 0.04 | 0.03 |
| 4,95 | 3,81 | 2,01 | 1,78 | 2,54 | 4,52 | 1,02 | 0,76 |

M2022-ASL

| A max | B max | C max | D ref | E ref | F ref | G min | H |
|-------|-------|-------|-------|-------|-------|-------|------|
| 0.231 | 0.196 | 0.150 | 0.107 | 0.100 | 0.178 | 0.04 | 0.03 |
| 5,87 | 4,98 | 3,81 | 2,72 | 2,54 | 4,52 | 1,02 | 0,76 |

Packaging 600 per 7" reel; 2200 per 13" reel
 Plastic tape: 12 mm wide, 8 mm pocket spacing
 M2022-AL: 0.3 mm thick, 3.7 mm pocket depth
 M2022-ALP: 0.3 mm thick, 2.25 mm pocket depth
 M2022-AS: 0.25 mm thick, 3.94 mm pocket depth



US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

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